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PROCEEDINGS

OF THE

American Society of Microscopists.

FOURTEENTH ANNUAL MEETING,

HELD AT

WASHINGTON, D. C., AUGUST 11, 12, 13 and 14, 1891.

VOLUME XIII.

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COMMITTEE ON PUBLICATION:

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1891.

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The Society does not hold itself responsible for the opinions expressed by members in its published proceedings, unless indorsed by a special vote.

CORRECTIONS.

Notwithstanding the delay in publishing the Proceedings, a part of the matter came to the Secretary too late to appear in the proper place. This is the reason for the malposition of the cuts on pages 33 and 35 and the separation of some of the text from the plates, like the description of Dr. Taylor's device, p. 189.

The following corrections should be made in the text :

Page 54, line 11, read "plate" for "plates." The plate given belongs to the second part of the description.

Page 96, line 20, after "epithelioma" refer to Nancrede, *Boston Medical and Surgical Journal*, May 22, 1890.

Same page, line 18, insert period after "etc"

Page 148, line 16, after "male" insert "having but one luminous gland partially developed in the fifth segment."

Same page, line 3 from bottom, substitute "seven" for "six," and in the last line "fifth and sixth" for "fourth and fifth."

Page 149, line 4, insert "over" in place of "of."

Page 155, in note, for "*Photinus*," read "*Photuris*."

Page 166, line 9, erase "T" before "Meehan."

Page 167, line 5, for "cotyledous," read "cotyledons."

Page 186, line 3 from bottom, for "Forty-two," read "Forty-one."

Page 195, insert stars between lines 17 and 18.

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PREFACE.

This is the last volume that will be issued under the title of "Proceedings of the American Society of Microscopists." Hereafter the Society will be known as the "American Microscopical Society," having incorporated under that name according to the laws of Congress for the District of Columbia, in Washington, August 13, 1892. The instrument of incorporation is hereto annexed. It was made the duty of the Executive Committee to prepare and present to the next meeting a new constitution and by-laws, those of the old Society (printed at the end of the minutes) having been provisionally adopted for this year.

Many of the illustrations in this volume are from cuts loaned by their owners without expense to the Society, and the Secretary desires to express thanks for the courtesy thus extended; to the Philadelphia "Law Register" for the illustrations of the signatures in the Jerome will case, last volume; to the Bausch & Lomb Optical Company of Rochester, the McIntosh Battery Company of Chicago, and Frank Zentmayer, of Philadelphia, for illustrations of microscopes; to Dr. Taylor for that of his apparatus for exhibiting slides; to the "American Journal of Science" for the figures of the Pyrophorus, Plate I, and the fire-fly spectrum, Plate V, from the paper by Langley and Very "On the Cheapest Form of Light," vol. xl, page 97, and to Prof. C. V. Riley for valuable suggestions relating to the luminous organs of insects.

INSTRUMENT OF INCORPORATION.

To all whom it may concern :

This is to certify that we, whose names are hereunto signed, are persons of full age, citizens of the United States, and a majority of whom are citizens of the District of Columbia, have associated ourselves together pursuant to the provisions of section 545, chapter 18, of the Revised Statutes of the United States relating to the District of Columbia, approved June 22, 1874, and the amendment thereto, approved April 23, 1884, under the corporate name of "THE AMERICAN MICROSCOPICAL SOCIETY."

This Society is to continue for twenty years, unless sooner dissolved according to law.

The particular business and objects of the Society shall be "the encouragement of microscopical research."

The affairs of this Society shall be managed by the undersigned and such members as may be hereafter elected members of said corporation, through duly elected officers, consisting of a President, two Vice-Presidents, Secretary, and Treasurer.

The said officers shall be chosen by ballot at the regular annual election of the corporation, at such time as may be fixed upon by the by-laws of the corporation.

The officers for the first year of its existence are :

President, MARSHALL D. EWELL.

Vice-Presidents, ROBERT REYBURN and R. J. NUNN.

Secretary, WM. H. SEAMAN.

Treasurer, C. C. MELLOR.

In witness whereof we have hereunto set our hands and seals this 13th day of August, A. D. 1891.

Signed by—

W. H. WALMSLEY.
FRANK L. JAMES.
WM. J. LEWIS.
SIMON H. GAGE.
CHARLES H. DENISON.
F. W. KUHNE.
GEO. E. FELL.
SAMUEL WAGENHALS.
DAVID S. KELLICOTT.
L. D. MCINTOSH.
ROBERT REYBURN, M. D.
J. FOSTER SCOTT.
G. N. ACKER, M. D.
H. L. E. JOHNSON.
H. A. ROBBINS.
V. A. MOORE.
J. MELVIN LAMB.
THOMAS TAYLOR.
J. M. STEDMAN.
H. H. DOUBLEDAY.
JOSÉ M. YZNAGA.
WM. H. SEAMAN.

DISTRICT OF COLUMBIA, *ss:*

Personally appeared before me, a notary public in and for said District, W. H. Walmsley, Robert Reyburn, Frank L. James, J. Foster Scott, Wm. J. Lewis, G. N. Acker, Simon H. Gage, H. L. E. Johnson, H. A. Robbins, Charles H. Denison, V. A. Moore, J. Melvin Lamb, F. W. Kuhne, Thomas Taylor, Geo. E. Fell, J. M. Stedman, Samuel Wagenhals, H. H. Doubleday, David S. Kellicott, José M. Yznaga, L. D. McIntosh, W. H. Seaman, who, being personally known to me, signed and acknowledged the above articles of incorporation, dated August 13, 1891, to be their act and deed.

Given under my hand and notarial seal this 13th day of August, 1891.

(Signed) S. M. HOWARD,
[SEAL.] *Notary Public.*

Received for record August 13, 1891, at 1 p. m., and recorded in Liber No. 5, fol. 371 *et seq.*, Acts of Incorporation for the District of Columbia, and examined by—

B. K. BRUCE, *Recorder.*

For the regular election of members whose names are not signed to the instrument of incorporation see page 200.

Statistics of the Meetings of the American Society of Microscopists.

		New members.	Registered.	Number on published list.
Indianapolis, Ind.	1878	49	49	49
Buffalo, N. Y.	1879	57	------	104
Detroit, Mich.	1880	31	------	125
Columbus, Ohio	1881	23	------	149
Elmira, N. Y.	1882	65	------	178
Chicago, Ill.	1883	91	------	258
Rochester, N. Y.	1884	46	104	295
Cleveland, Ohio	1885	40	82	325
Chautauqua, N. Y.	1886	70	114	384
Pittsburgh, Pa.	1887	50	87	(*)
Columbus, Ohio	1888	16	------	394
Buffalo, N. Y.	1889	21	74	329
Detroit, Mich.	1890	64	66	338
Washington, D. C.	1891	53	43	381

* No list published. The drop in numbers on list from 1888 to 1889 was caused by more thorough revision of the list.